

chain nodes :

19 20 21 22 24 25 26 27 28 29

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 30 31 32 33 34 35

chain bonds :

1-19 12-26 14-21 17-28 19-20 19-24 20-21 21-22 24-25 25-26 26-27 28-29 29-32

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15 15-16 16-17
17-18 30-31 30-35 31-32 32-33 33-34 34-35

exact/norm bonds :

13-14 13-18 14-15 15-16 16-17 17-18 19-20 20-21 21-22 25-26 26-27

exact bonds :

1-19 12-26 14-21 17-28 19-24 24-25 28-29 29-32

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 30-31 30-35 31-32 32-33 33-34
34-35

G1:H,O

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom
13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS20:CLASS21:CLASS22:CLASS24:CLASS
25:CLASS26:CLASS27:CLASS28:CLASS29:CLASS30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom

AN 2004:20638 CAPLUS
 DN 140:94454
 TI Chiral dopant with phenylethanediol functionality
 IN Lub, Johan; Wegh, Rene T.
 PA Koninklijke Philips Electronics N. V., Neth.
 SO PCT Int. Appl., 33 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2004002935	A1	20040108	WO 2003-IB2927	20030613	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	AU 2003244961	A1	20040119	AU 2003-244961	20030613	
	EP 1519910	A1	20050406	EP 2003-738435	20030613	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
	CN 1665772	A	20050907	CN 2003-815123	20030613	
	JP 2005531629	T2	20051020	JP 2004-517149	20030613	
	US 2006022167	A1	20060202	US 2004-519604	20041227	
PRAI	EP 2002-77561	A	20020628			
	WO 2003-IB2927	W	20030613			

OS MARPAT 140:94454
 RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:20638 CAPLUS
 DN 140:94454
 ED Entered STN: 11 Jan 2004
 TI Chiral dopant with phenylethanediol functionality
 IN Lub, Johan; Wegh, Rene T.
 PA Koninklijke Philips Electronics N. V., Neth.
 SO PCT Int. Appl., 33 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07C069-90
 ICS C07C069-92; C07C069-618; C07D493-04; C09K019-58; C07D307-00
 CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 38, 73, 74
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2004002935	A1	20040108	WO 2003-IB2927	20030613	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		

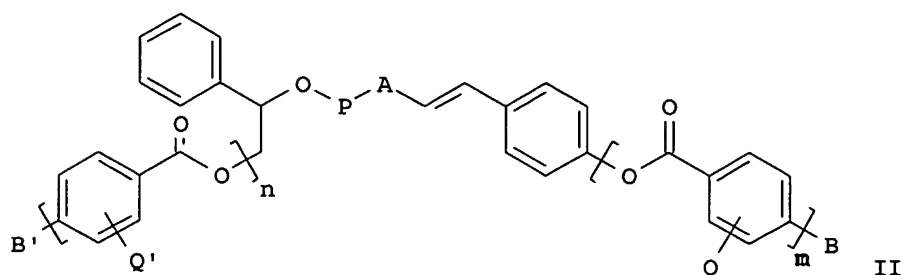
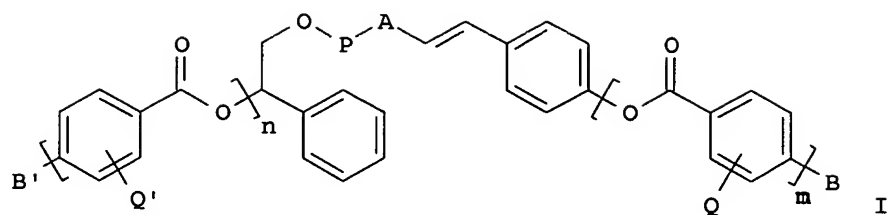
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AU 2003244961	A1	20040119	AU 2003-244961	20030613
EP 1519910	A1	20050406	EP 2003-738435	20030613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1665772	A	20050907	CN 2003-815123	20030613
JP 2005531629	T2	20051020	JP 2004-517149	20030613
US 2006022167	A1	20060202	US 2004-519604	20041227
PRAI EP 2002-77561	A	20020628		
WO 2003-IB2927	W	20030613		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004002935	ICM	C07C069-90
	ICS	C07C069-92; C07C069-618; C07D493-04; C09K019-58; C07D307-00
	IPCI	C07C0069-90 [ICM,7]; C07C0069-92 [ICS,7]; C07C0069-618 [ICS,7]; C07C0069-00 [ICS,7,C*]; C07D0493-04 [ICS,7]; C07D0493-00 [ICS,7,C*]; C09K0019-58 [ICS,7]; C07D0307-00 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-92 [I,A]; C07D0493-00 [I,C*]; C07D0493-04 [I,A]; C09K0019-58 [I,A]; C09K0019-58 [I,C*]
	ECLA	C07C069/92; C07D493/04+307B+307B+2; C09K019/58B
AU 2003244961	IPCI	C07C0069-90 [ICM,7]; C07C0069-92 [ICS,7]; C07C0069-618 [ICS,7]; C07C0069-00 [ICS,7,C*]; C07D0493-04 [ICS,7]; C07D0493-00 [ICS,7,C*]; C09K0019-58 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-92 [I,A]; C07D0493-00 [I,C*]; C07D0493-04 [I,A]; C09K0019-58 [I,A]; C09K0019-58 [I,C*]
EP 1519910	IPCI	C07C0069-90 [ICM,7]; C07C0069-92 [ICS,7]; C07C0069-618 [ICS,7]; C07C0069-00 [ICS,7,C*]; C07D0493-04 [ICS,7]; C07D0493-00 [ICS,7,C*]; C09K0019-58 [ICS,7]; C07D0307-00 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-618 [I,A]; C07C0069-90 [I,A]; C07C0069-92 [I,A]; C07D0493-00 [I,C*]; C07D0493-04 [I,A]; C09K0019-58 [I,A]; C09K0019-58 [I,C*]
CN 1665772	IPCI	C07C0069-90 [ICM,7]; C07C0069-92 [ICS,7]; C07C0069-618 [ICS,7]; C07C0069-00 [ICS,7,C*]; C07D0493-04 [ICS,7]; C07D0493-00 [ICS,7,C*]; C09K0019-58 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-92 [I,A]; C07D0493-00 [I,C*]; C07D0493-04 [I,A]; C09K0019-58 [I,A]; C09K0019-58 [I,C*]
JP 2005531629	IPCI	C07C0069-92 [ICM,7]; C07C0069-734 [ICS,7]; C07C0069-00 [ICS,7,C*]; C09K0019-54 [ICS,7]; G02B0005-22 [ICS,7]; G02B0005-26 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-92 [I,A]; C07D0493-00 [I,C*]; C07D0493-04 [I,A]; C09K0019-58 [I,A]; C09K0019-58 [I,C*]
	FTERM	2H048/CA04; 2H048/CA09; 2H048/CA14; 2H048/FA04; 2H048/FA07; 2H048/FA15; 4H006/AA01; 4H006/AB64; 4H006/BJ50; 4H006/BP30; 4H027/BA02; 4H027/BD16; 4H027/CF03
US 2006022167	IPCI	C09K0019-36 [I,A]; C09K0019-52 [I,A]; C09K0019-20 [I,A]; C09K0019-10 [I,C*]; C07C0069-76 [I,A]; C07C0069-00 [I,C*]
	NCL	252/299.700; 252/299.010; 252/299.670; 428/001.100; 560/085.000
	ECLA	C07C069/92; C07D493/04+307B+307B+2; C09K019/58B
OS	MARPAT 140:94454	

GI



- AB The invention pertains to a phenylethanedione derivative having ≥ 1 polymerizable group, characterized in that the phenylethanedione derivative further comprises ≥ 1 photo-convertible group for adjusting the helical twisting power of the phenylethanedione derivative. According to a preferred embodiment the phenylethanedione has the formula I or II, wherein A = bond or p-phenylene group; B, B' = independently (O)p-CoH₂o-O-CO-CR':CH₂, o = 2-12; p = 0 or 1; R' = H or CH₃; P = CH₂ or C:O; Q, Q' = H, Cl-3 alkyl or alkoxy, halogen, CN; n = 1-3 integer; m = 0-2 integer. Thus, 1 g (R)-(-)-1-phenyl-1,2-ethanediol and 0.18 g 4-(6-acryloyloxyhexyloxy)cinnamic acid (preparation given) were reacted to give 3.84 g (R)-4-(6-acryloyloxyhexyloxy)cinnamoyloxy)-1-phenylethyl ester, 0.156 g of which was mixed with 2,5-di[4-(3-acryloyloxypropyloxy)phenoxyoxy] toluene 0.667, 2,5-di[4-(6-acryloyloxyhexyloxy)phenoxyoxy] toluene 0.167, and Darocure 4265 0.01 g, applied on a polyimide substrate, irradiated through a photo mask, and polymerized to give a cholesteric color filter.
- ST chiral dopant phenylethanedione functionality cholesteric copolymer color filter prepn
- IT Liquid crystals, polymeric
(cholesteric; preparation of chiral dopant with phenylethanedione functionality for color filters)
- IT Liquid crystal displays
Optical filters
Optical instruments
(preparation of chiral dopant with phenylethanedione functionality for color filters)
- IT 56772-46-4P 109428-31-1P 110229-76-0P 122246-54-2P,
4-(6-Hydroxyhexyloxy)cinnamic acid 122246-55-3P 503000-61-1P
503000-66-6P 503000-70-2P 503000-72-4P 642471-33-8P 642471-34-9P
642471-36-1P 642471-37-2P 642471-38-3P 642471-40-7P
642471-41-8P 642471-42-9P 642471-45-2P 642471-46-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of chiral dopant with phenylethanedione functionality)
- IT 642471-43-0P 642471-47-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(monomer; preparation of chiral dopant with phenylethanedio1 functionality)

IT 642471-35-0P 642471-39-4P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of chiral dopant with phenylethanedio1 functionality)

IT 642471-44-1P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of chiral dopant with phenylethanedio1 functionality)

IT 642471-48-5P 642471-50-9P 642471-51-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (preparation of chiral dopant with phenylethanedio1 functionality)

IT 93-56-1 99-96-7, 4-Hydroxybenzoic acid, reactions 110-87-2,
 3,4-Dihydro-2H-pyran 814-68-6, Acryloyl chloride 2009-83-8,
 6-Chlorohexanol 3188-13-4, Chloromethyl ethyl ether 7400-08-0,
 4-Hydroxycinnamic acid 10606-72-1 52010-97-6, 4-
 Hydroxymethylbenzaldehyde 83883-26-5, 4-(6-Acryloyloxyhexyloxy)benzoic
 acid 146346-94-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; preparation of chiral dopant with phenylethanedio1 functionality)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Farrand, L; WO 9800428 A 1998 CAPLUS
 (2) Liang-Chy, C; US 5668614 A 1997 CAPLUS
 (3) Lub, J; WO 0034808 A 2000 CAPLUS
 (4) Rego, J; POLYMER PREPRINTS 1997, V38(1), P364 CAPLUS
 (5) Rolic Ag; WO 9964383 A 1999 CAPLUS
 (6) Seiko Epson Corp; EP 0643318 A 1995 CAPLUS

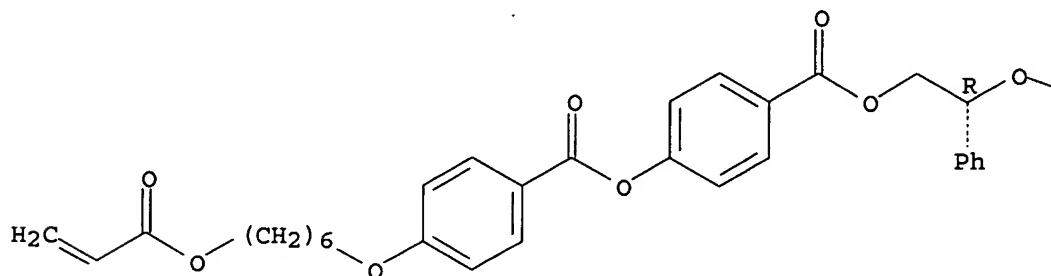
IT 642471-38-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; preparation of chiral dopant with phenylethanedio1
 functionality)

RN 642471-38-3 CAPLUS

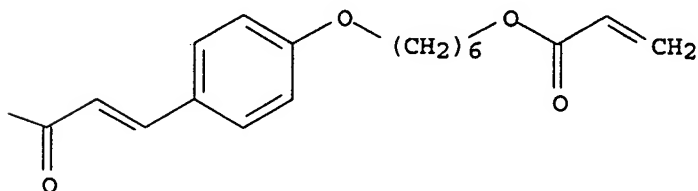
CN Benzoic acid, 4-[[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,
 4-[[[(2R)-2-[[1-oxo-3-[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]phenyl]-2-
 propenyl]oxy]-2-phenylethoxy]carbonyl]phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



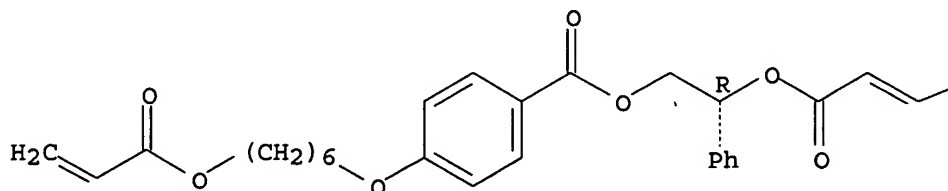
PAGE 1-B



IT 642471-44-1P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of chiral dopant with phenylethanedioyl functionality)
 RN 642471-44-1 CAPLUS
 CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,
 4-[3-oxo-3-[(1R)-2-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]-1-
 phenylethoxy]-1-propenyl]phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B

